

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) Sheet 1 of 3				Complete if Known	
				Application Number	10/222,279 10/617,030
				Filing Date	8/16/2002
				First Named Inventor	Van Dun
				Group Art Unit	1714 1716
				Examiner Name	Nutter
				Attorney Docket Number	43225.44575USPT

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code* (if known)			
✓	1	US-3,456,044	07/15/1969	Pahlke	
✓	2	US-3,485,706	12/23/1969	Evans	
✓	3	US-3,645,992	02/29/1972	Elston	
✓	4	US-4,322,027	03/30/1982	Reba	
✓	5	US-4,340,563	07/20/1982	Appel et al.	
✓	6	US-4,352,849	10/05/1982	Mueller	
✓	7	US-4,413,110	11/01/1983	Kavesh et al.	
✓	8	US-4,597,920	07/01/1986	Golike	
✓	9	US-4,663,220	05/05/1987	Wisneski et al.	
✓	10	US-4,668,566	05/26/1987	Braun	
✓	11	US-4,798,081	01/17/1989	Hazlitt et al.	
✓	12	US-4,820,557	04/11/1989	Warren	
✓	13	US-4,837,084	06/06/1989	Warren	
✓	14	US-4,865,902	09/12/1989	Golike et al.	
✓	15	US-4,927,708	05/22/1990	Herran et al.	
✓	16	US-4,937,299	06/26/1990	Ewen et al.	
✓	17	US-4,952,451	08/28/1990	Mueller	
✓	18	US-4,963,419	10/16/1990	Lustig et al.	
✓	19	US-5,008,204	04/16/1991	Stehling	
✓	20	US-5,059,481	10/22/1991	Lustig et al.	
✓	21	US-5,089,321	02/18/1992	Chum et al.	

FOREIGN PATENT DOCUMENTS					
Examiner Initials	Cite No.	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code* - Number* - Kind Code* (if known)			
	22	EP 089268 A1 MISSING	09/28/1983	BASF	
	23	WO90/03414 A1 MISSING	04/05/1990	Exxon Chemical	

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T*
	24	Borealis Unveils Borstar - Its New Proprietary Polyethylene Technology, Press Release, October 10, 1995. MISSING	
	25	MAPLESTON, P., Infrared Process Is Fast and Repeatable, Mod. Plast. Int., V. 22, No. 10, Oct. 1992, p. 34/8, abstract only. MISSING	

Examiner Signature	<i>[Signature]</i>	Date Considered	11-04
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

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of

3

Complete if Known

Application Number	10/222,273 10/817,030
Filing Date	8/16/2002
First Named Inventor	Van Dun
Group Art Unit	1744 1711
Examiner Name	Nu Hser
Attorney Docket Number	43225.4457USPT

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No. 1	Document Number Number-Kind Code 2 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
~	26	US-5,206,075	04/27/1993	Hodgson, Jr.	
~	27	US-5,218,071	06/08/1993	Tsutsui et al.	
~	28	US-5,241,031	08/31/1993	Mehta	
~	29	US-5,252,017	10/12/1993	Hodel	
~	30	US-5,272,236	12/21/1993	Lai et al.	
~	31	US-5,278,272	01/11/1994	Lai et al.	
~	32	US-5,290,498	03/01/1994	Shiraki et al.	
~	33	US-5,292,845	03/08/1994	Kawasaki et al.	
~	34	US-5,417,561	05/23/1995	Shiraki et al.	
~	35	US-5,665,800	09/09/1997	Lai et al.	
~	36	US-5,683,767	11/04/1997	Shiraki et al.	
~	37	US-5,834,393	11/10/1998	Jacobsen et al.	
~	38	US-5,908,679	06/01/1999	Berthold et al.	
~	39	US-6,043,180	03/28/2000	Jacobsen et al.	
~	40	US-6,054,544	04/25/2000	Finlayson et al.	
~	41	US-6,218,472 B1	04/17/2001	Debras et al.	
~	42	US-6,221,982 B1	04/24/2001	Debras et al.	
~	43	US-6,346,575 B1	02/12/2002	Debras et al.	
~	44	US-6,441,096 B1	08/27/2002	Backman et al.	
~	45	USSN 60/313,176	08/17/2001	Nicasy et al.	
~	46	US-2002/0045711A1	04/18/2002	Backman et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No. 1	Foreign Patent Document Country Code 3 - Number 4 - Kind Code 5 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T 6
	47	WO 93/03093	02/18/1993	Exxon Chemicals		
	48	WO 96/16092	05/30/1996	Dow Chemical		
	49	WO 96/28480	09/19/1996	Dow Chemical		
	50	WO 97/19807	06/05/1997	Borealis A/S		
	51	WO 97/33116	09/12/1997	Borealis A/S		
	52	WO 97/43323	11/20/1997	Dow Chemical		

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	53	YERNAUX J., Polymer Developments for Pipe Systems, Polyethylene: The 1990s and Beyond, Conference Proceedings London, 19th-20th May 1992, Paper 16, 42C11 PRI; BP Chemicals Ltd.; Shell Chemicals Ltd.; European Chemical News.	

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	54	US-6,191,227 B1	02/20/2001	Matsuoka, et al.	
	55	US-6,204,349 B1	03/20/2001	Shinohara et al.	
	56	US-6,252,017 B1	08/26/2001	Debras et al.	
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	57	WO 98/27119	06/25/1998	Dow Chemical		
	58	WO 99/14271	03/25/1999	Dow Chemical		
	59	WO 01/05852	01/25/2001	Dow Chemical		
	60	WO 01/02480 A1	01/11/2001	Elenas GMBH		
	61	WO 01/79347 A2	10/25/2001	Borealis Technology OY		
	62	EP 1146078 A1	10/17/2001	Borealis Technology OY		
	63	EP 1146079 A1	10/17/2001	Borealis Technology OY		
	64	EP 1201711 A1	05/02/2002	Atofina Research		
	65	EP 1201713 A1	05/02/2002	Atofina Research		

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	66	BERTHOLD, et al., Advanced Polymerization Process for Tailor-Made Pipe Resins, Plastics Pipe IX, Edinburgh, 9/1995, pp. 433-441.	
	67	BOHM et al., The Industrial Synthesis of Bimodal Polyethylene Grades with Improved Properties, Stud. Surf. Sci. Catal., 1984, pp. 351-63, v. 89.	
	68	BOHM et al., The Microreactor Model-Guideline for PE-HD Process and Product Development, Ziegler Catalysts, 1995, 387-400.	

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[Signature]	1	US-6,114,483	09-05-2000	Coughlin et al.	
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		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
[Signature]	2	WO 00/22040	04-20-2000	Borealis Polymers		

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[Signature]	3	International Search Report, January 22, 2003.	

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